

# Communicable Disease Surveillance

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# Why Investigate Diseases?

Prevention is the source of urgency

- Find and fix ongoing point source  
(contaminated water supply or food)
- Close problematic locations
- Identify agent (“smoking gun”)
- Find, isolate, and treat infectious people
- Provide prophylaxis to those exposed

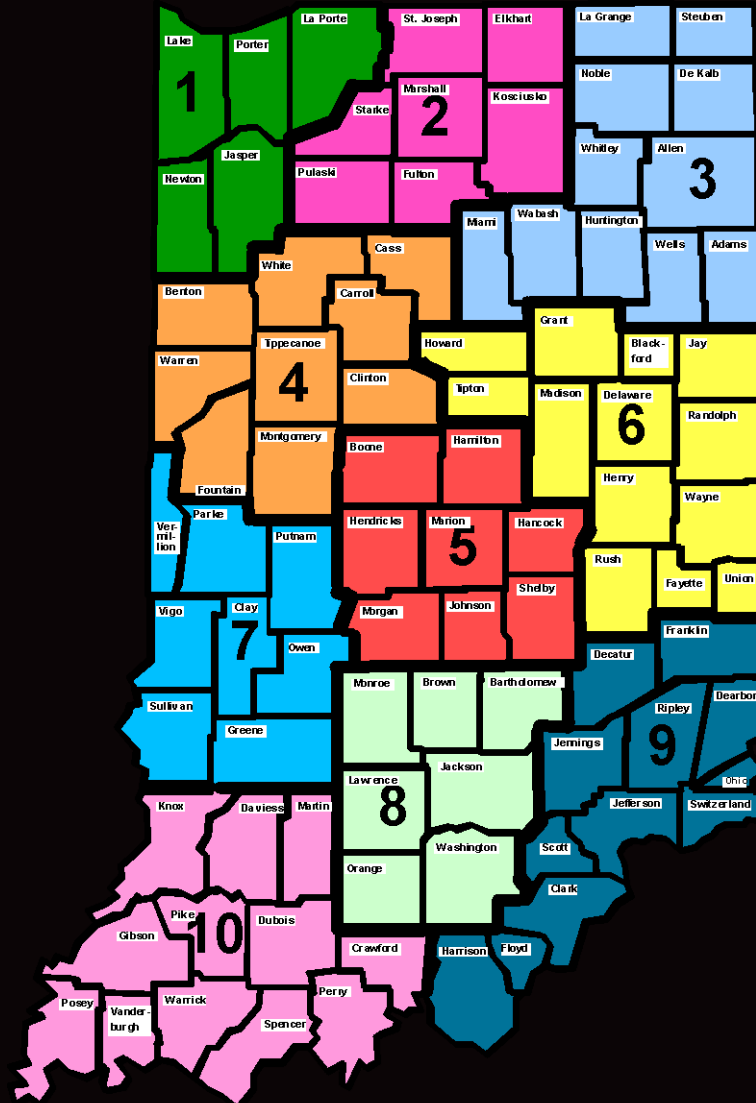
# Surveillance and Investigation Division

- Investigate disease outbreaks
  - Conduct disease surveillance
  - Analyze public health data
  - Assist agency program areas
  - Serve as subject matter experts
  - Serve as media spokespeople
  - Advise health care providers and public
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# Field Epidemiology Program

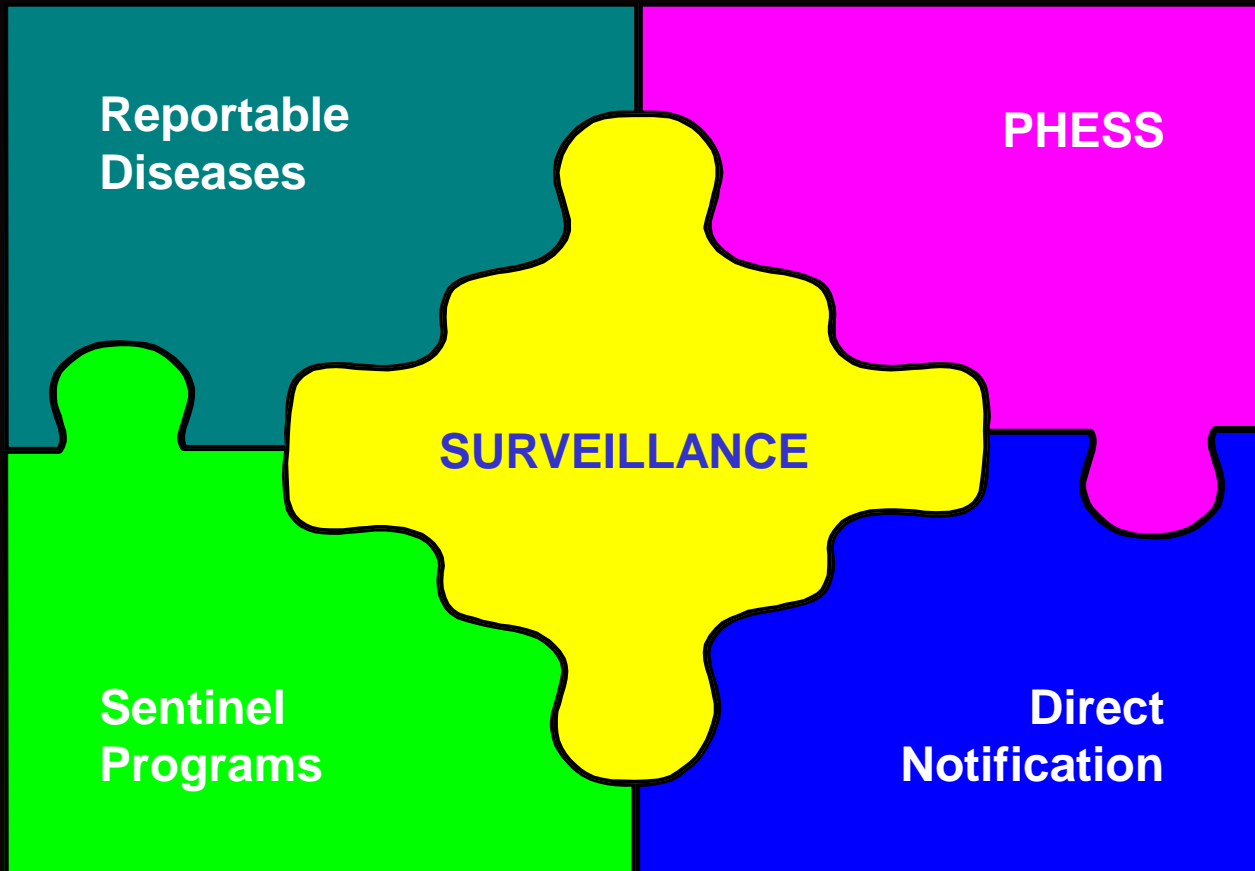
- Ten public health preparedness districts
  - Ten field epidemiologists
    - Assist local health departments with outbreak investigation, case surveillance, infection control
    - Serve as liaison for ISDH in districts
    - Information-gathering projects
    - May serve as media spokespeople
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## Public Health Preparedness Districts



# Surveillance

- Systematic and ongoing assessment of the health of a community
    - Collection
    - Analysis
    - Interpretation
    - Dissemination
    - Use of data
  - Surveillance provides information for action
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# Reportable Diseases

- Health care providers, hospitals and labs report to LHD according to law
- LHD use ISDH case investigation forms to investigate and report cases
- Advantages
  - Inexpensive
  - Less labor intensive
  - Routine surveillance method



# **Communicable Disease Reporting Rule For Physicians, Hospitals, and Laboratories**

**410 IAC 1-2.3**

# Purpose of Rule

- Identify and monitor diseases posing a particular public health threat to community
  - severity
  - ease of transmission
  - control challenges
- Define who has authority and responsibility to monitor and respond

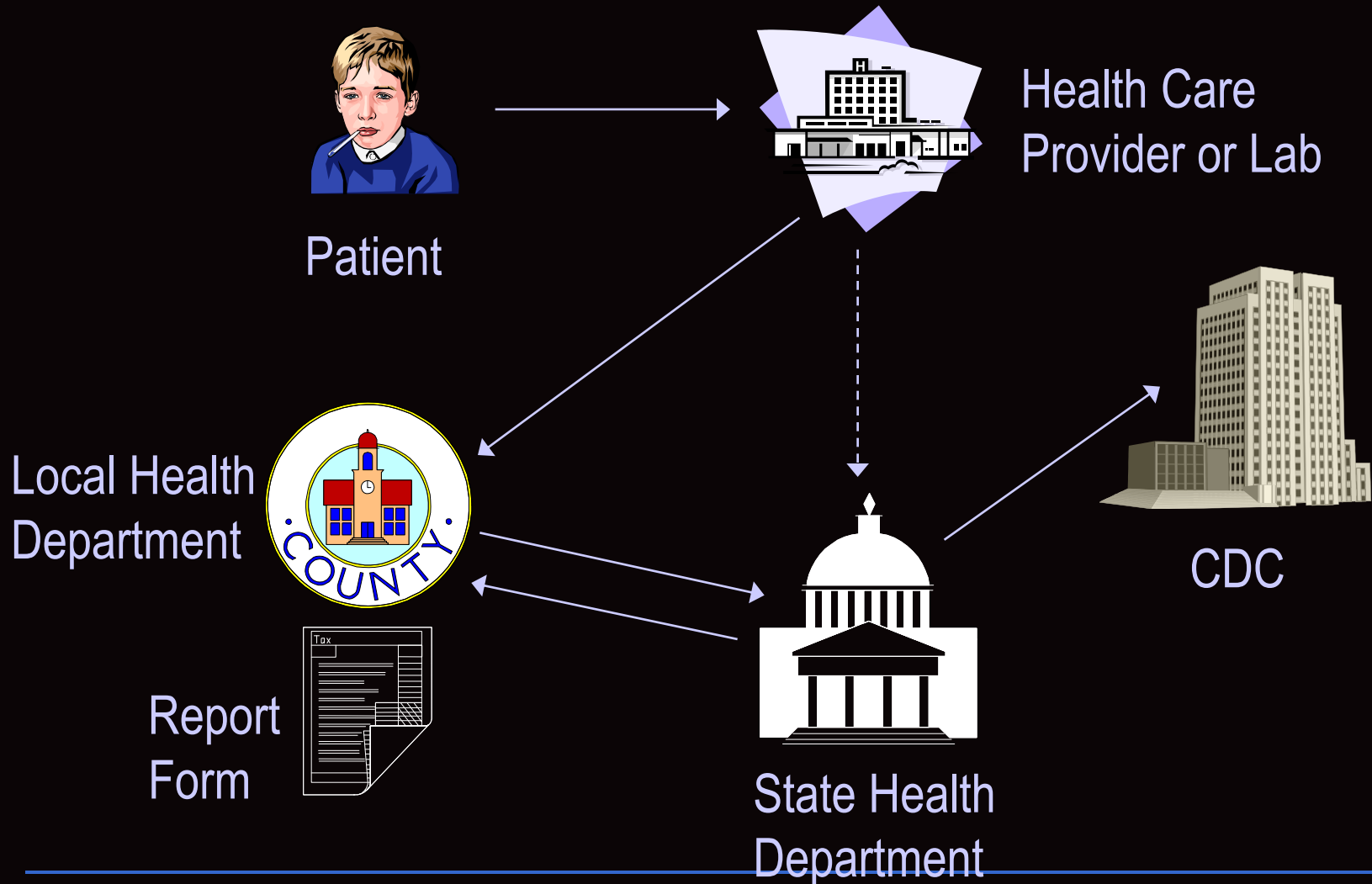
# Rule Provisions

- Definitions
  - Reporting requirements
  - Reportable diseases
    - List for physicians and hospital administrators
    - List for laboratories
  - Investigation procedures
  - General control methods
  - Revised rule effective December 12, 2008
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# Investigation Procedures

- Provider reports case to local health department
  - Local health department (LHD) uses ISDH case investigation form to investigate case
    - obtain demographic and clinical information from provider
    - obtain demographic and exposure history from case
  - LHD reviews information for risk factors, links
  - LHD can advise regarding disease information and control methods
  - LHD sends completed form to ISDH
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# Disease Reporting Pathway



# Sentinel Surveillance

- Selected providers/facilities report
- Monitor key health indicators or events (often seasonal)
- Monitor conditions for which information not otherwise available
- Monitor conditions in subgroups more susceptible
- Used to calculate disease morbidity

# Syndromic Surveillance (PHESS)

- Gives information before diagnosis is available
  - Data streams
    - Chief complaints from 76 hospital EDs
    - Indiana Poison Center call data
    - School absenteeism
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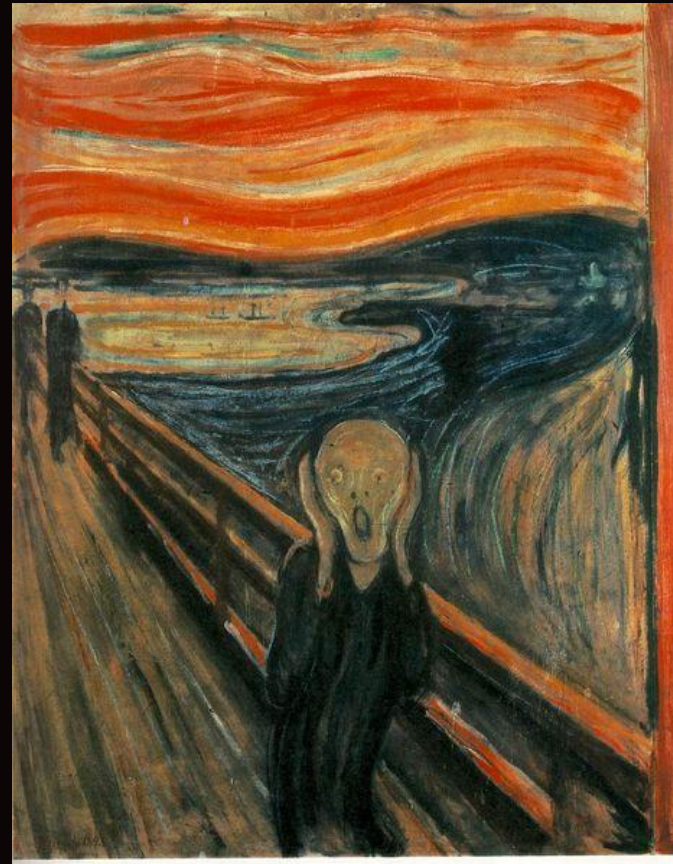
# School Absenteeism

- Joint rule created by Indiana Department of Education and ISDH
- All schools must report absenteeism rates of 20% or above regardless of cause to LHD
- LHD will investigate, notify ISDH if needed
- 20% is legal minimum threshold—report if notice ANY abnormal absenteeism rate



# Direct Notification

- Phone call
- E-mail
- News report
- Fridays at 4:00



# What is an Outbreak?

- Occurrence of more cases of a disease than expected in a population during a certain time
- One case of smallpox, anthrax, plague, botulism, or measles anywhere in the US is an outbreak requiring immediate response
- Epidemic and outbreak are the same
  - Epidemic is often applied to an outbreak of special concern

# Outbreak Detection

- Recognized and reported by health care providers
- Recognized and reported by those affected (e.g., coworkers, school, banquet)
- Detected by PH agency through surveillance
- Enhanced surveillance in cooperation with state and federal public health officials

# Investigating Outbreaks

- Detect problem
- Verify diagnosis
- Confirm outbreak
- Identify / count cases
- Characterize data → time / place / person
- Identify agent
- Take immediate control measures
- Formulate / test hypotheses
- Implement / evaluate additional control measures
- Report findings

# Public Health Impact

- Ban on sale of pet turtles in US
- Increased hand washing facilities at fairs and petting zoos
- Required testing of ground beef for *E. coli* O157:H7
- Safe handling and cooking labels on meats
- Warning labels for pregnant women on soft cheeses

# Public Health Impact

- Redesign of produce misters
- Protective equipment and devices in medical care settings
- Vaccination recommendations
- Amended state laws

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# Any Questions?

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